

WO 2004/112652

PCT/US2004/019829

WHAT IS CLAIMED IS:

1. A device for contracting tissue in a mammalian body, comprising:
 - a body having a longitudinal axis; and
 - a plurality of legs arranged about the body, each leg having one end coupled to the body, the plurality of legs being radially splayed about the axis, each leg including a snap-acting spring tip engageable with the tissue, each leg being capable of transformation between a deployment state and a treatment state.
2. The device of claim 1 wherein the spring tips are closer to the longitudinal axis when the legs are in the treatment state than the tips are when the legs are in the deployment state.
3. The device of claim 1 wherein each snap-acting spring tip comprises two tip segments affixed one to another.
4. The device of claim 1 further comprising:
 - a spicule attached to each spring tip.
5. The device of claim 1 wherein each leg further includes at least one deformation element capable of forming a localized bend in response to an axial force applied to the leg.
6. The device of claim 1 wherein the at least one deformation element is selected from a group consisting of a notch, a perforation, a corrugation, and a combination thereof.
7. The device of claim 1 wherein each leg further includes at least one barb directed towards the body.

WO 2004/112652

PCT/US2004/019829

8. The device of claim 1 wherein at least the legs comprise a material selected from a group consisting of a nickel-titanium alloy, a nickel-cobalt alloy, a cobalt alloy, a thermoset plastic, stainless steel, a stainless steel alloy, a biocompatible shape-memory material, a biocompatible superelastic material, and a combination thereof.
9. The device of claim 1 wherein at least a portion of the device includes a therapeutic agent selected from a group consisting of an antithrombotic, an anticoagulant, an antibiotic, an anti-inflammatory, and a combination thereof.
10. The device of claim 1 wherein at least a portion of the device is radiopaque.
11. The device of claim 1 wherein at least one radial dimension of a mitral valve annulus is shortened when the legs are in the treatment state.
12. A system for contracting tissue in a mammalian body including the contracting device of claim 1 and further comprising:
 - a delivery catheter, wherein the contracting device is slidably received within a lumen of the delivery catheter.
13. The system of claim 12 further comprising:
 - a guidewire slidably received within a lumen of the delivery catheter.
14. The system of claim 12 further comprising:
 - a magnetic guidewire for positioning within a coronary sinus.
15. The system of claim 12 wherein the delivery catheter comprises a compression device.

WO 2004/112652

PCT/US2004/019829

16. The system of claim 12 wherein the delivery catheter comprises a positioning device.

17. The system of claim 12 wherein the delivery catheter comprises a guiding sheath, a holding tube slidably received within a lumen of the guiding sheath, a push tube slidably received within a lumen of the holding tube, and a balloon catheter including at least one balloon and being slidably received within a lumen of the push tube.

18. The system of claim 17 wherein the push tube acts as a compression device.

19. The system of claim 17 wherein the at least one balloon acts as a positioning device.

20. The system of claim 17 wherein the at least one balloon acts as a compression device.

21. The system of claim 12 wherein the legs are in a radially compressed configuration while the contracting device is within a lumen of the delivery catheter and wherein the legs self-expand when the contracting device is released from the delivery catheter.

WO 2004/112652

PCT/US2004/019829

22. A method of contracting tissue in a mammalian body, comprising:
- delivering a contracting device in a lumen of a catheter proximate a treatment area;
 - releasing the contracting device from the catheter;
 - positioning legs of the contracting device on tissue to be contracted;
 - exerting a force on the contracting device;
 - transforming the device into a treatment state; and
 - reducing a compass of the tissue in response to the treatment state.
23. The method of claim 22 further comprising:
- bending the legs in response to the force.
24. The method of claim 22 wherein reducing a compass of the tissue in response to the treatment state comprises reducing a diameter of a mitral valve annulus to effect a mitral valve repair in response to the treatment state.